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duced by the difficulties of the measurements, which Mr. Roberts has mentioned. The following are the computed places of the satellite at the times corresponding to the beginning, middle, and ending of each exposure, as they are deduced from the elements adopted in the ephemeris published in vol. 50 :—

	Computed Dist.	Computed Posit.	Measured Posit.		Computed Dist.	Computed Posit.	Measured Posit.
1890.	″	°	° ′	1891.	″	°	° ′
Dec. 9	16·62	64·21	59 28	Feb. 4	12·70	204·29	207 6
	16·78	62·10			12·56	203·32	
	16·88	60·02			12·42	202·33	
12	16·82	241·14	232 10	10	11·51	195·77	193 55
	16·83	240·97			11·30	194·00	
	16·84	240·79			11·09	192·16	
1891. Jan. 10	14·10	260·27	261 46	20	12·56	267·89	277 3
	14·25	259·27			12·81	266·18	
	14·41	258·39			13·06	264·54	
Feb. 1	13·10	26·76	31 29	24	16·00	48·03	44 53
	12·86	25·21			15·91	47·13	
	12·62	23·61			15·82	46·23	

Ephemeris for Physical Observations of the Moon. By A. Marth.

1891 Nov. 9 to Dec. 25.

Greenwich, Noon.	Selenographical Colong. of the Sun.	Selenographical Lat. of the Sun.	Geocentric Libration. Sel. Long. of the Earth.	Geocentric Libration. Lat. of the Earth.	Combined Amount.	Direction.
1891.	°	°	°	°	°	°
Nov. 9	7·15	+0·28	−5·30	+6·76	8·58	37·9
10	19·32	·25	4·38	6·78	8·07	32·7
11	31·48	·22	3·17	6·38	7·12	26·3
12	43·63	·19	1·73	5·57	5·83	17·2
13	55·77	·16	−0·14	4·38	4·39	1·8
14	67 91	·13	+1·49	2·90	3·26	332·8
15	80·05	+0·10	+3·04	+1·23	3·28	292·1
16	92·18	·06	4·39	−0·51	4·42	263·4
17	104·32	+ ·03	5·46	2·18	5·88	248·2
18	116·46	·00	6·19	3·67	7·19	239·2
19	128·60	− ·03	6·51	4·92	8·15	232·8
20	140·74	·06	6·45	5·86	8·73	227·6
21	152·89	·09	6·03	6·49	8·85	222·7
22	165·05	−0·12	+5·29	−6·79	8·60	217·8
23	177·21	·15	4·30	6·78	8·02	212·2

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Greenwich, Noon.	Selenographical Colong. of the Sun.	Selenographical Lat. of the Sun.	Geocentric Libration. Sel. Long. of the Earth.	Geocentric Libration. Lat. of the Earth.	Combined Amount.	Direction.
1891. Nov. 24	189°·38	−0°·18	+3°·12	−6°·48	7°·18	205°·6
25	201·55	·21	1·82	5·89	6·17	197·1
26	213·73	·23	+0·49	5·06	5·09	185·6
27	225·92	·26	−0·81	−4·01	4·09	168·7
Dec. 7	347·80	−0·51	−3·47	+6·78	7·61	26·7
8	359·96	·54	2·59	6·48	6·98	21·7
9	12·11	·56	1·60	5·79	6·00	15·4
10	24·26	·59	−0·51	4·73	4·76	6·2
11	36·40	·62	+0·61	3·38	3·43	349·8
12	48·54	·65	1·75	1·81	2·52	316·1
13	60·67	−0·68	+2·82	+0·14	2·82	272·9
14	72·80	·71	3·77	−1·52	4·07	248·0
15	84·93	·74	4·55	3·07	5·49	235·9
16	97·05	·77	5·08	4·42	6·73	228·9
17	109·18	·80	5·34	5·48	7·65	224·1
18	121·31	·82	5·27	6·23	8·15	220·1
19	133·45	·85	4·88	6·64	8·24	216·2
20	145·59	−0·87	+4·19	−6·73	7·92	211·8
21	157·73	·90	3·23	6·51	7·26	206·3
22	169·88	·92	2·05	6·00	6·34	198·8
23	182·04	·94	+0·77	5·24	5·31	188·7
24	194·20	·96	−0·58	4·26	4·30	172·3
25	206·37	−0·98	−1·89	−3·10	3·63	148·7

Ephemerides of the Satellites of Saturn, 1891–92. By A. Marth.

Though the proper determination of the plane of *Saturn's* equator as the fundamental plane to which the orbits of the satellites are to be referred may have to be postponed till the results of the observations of 1892 shall have become available, the values of the nodes and inclinations of the orbits of Tethys, Rhea, and Enceladus, which Dr. Hermann Struve has deduced from his observations made during the four oppositions of 1886–89, and of which he has given some account in his papers published in Nos. 2945–46 and 2983–84 of the *Astronomische Nachrichten*, indicate the position of the planet's equator well enough to allow some fairly approximate assumption to be made, quite independently of any observations of the ring. The values of

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